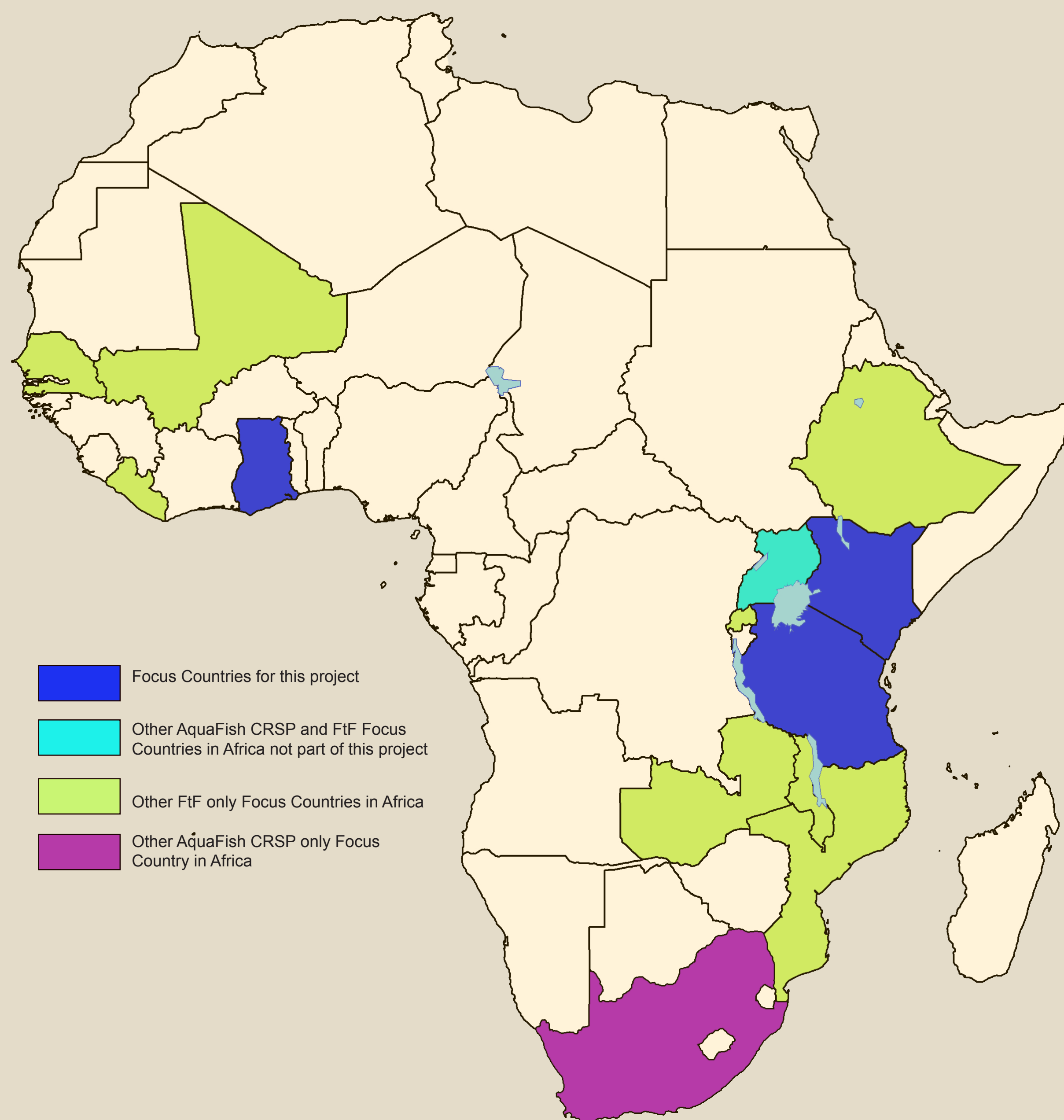


# ADDRESSING THE GOALS AND OBJECTIVES OF THE FEED THE FUTURE INITIATIVE: ENHANCING THE PROFITABILITY OF SMALL AQUACULTURE OPERATIONS IN GHANA, KENYA, AND TANZANIA

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## INTRODUCTION

The Aquaculture & Fisheries Collaborative Research Support Program (AquaFish CRSP), located at Oregon State University, brings together resources from US and Host Country institutions to develop sustainable solutions in aquaculture and fisheries for improving health, building wealth, conserving natural environments, and strengthening poorer societies' ability to self-govern in ways that respect the sanctity of all. In aligning strategies and goals with Feed the Future (FtF), the US government's new global hunger and food security initiative, USAID recognizes that providing the poor with better access to well managed water resources can help eradicate poverty and improve livelihoods, health, and ecosystems. In 2010, AquaFish CRSP received funding from USAID for a three-year project to enhance small-scale aquaculture operations and accelerate the adoption rates of best management practices (BMPs) in Ghana, Kenya, and Tanzania. Past CRSP work in sub-Saharan Africa has allowed for the establishment of strong working relationships with the universities, private operations, NGOs, and government ministries in charge of fisheries, aquaculture, and the environment in these countries. This study looks to continue and extend these partnerships by involving current and new partners in workshops and trainings. Focusing on Ghana for the initial scale up, activities in Kenya and Tanzania will be necessary to begin spreading BMP technologies to the whole of sub-Saharan Africa. Three primary components of outreach—central media, demonstrations, and lateral diffusion—will be used for the rapid diffusion of BMPs to promote the adoption of best management practices for pond aquaculture within three target technologies: effluent management practices, nutrient management practices, and profitability analysis.



## TARGET TECHNOLOGIES

### Effluent Management Practices

- Guidelines on pond operations, use of settling ponds and vegetation ditches, draining to wetlands, top-releases for partial drainage, and water re-use (by holding or re-circulating to other ponds).
- Recommending harvest methods that involve little to no water drainage to reduce effluents and promote retention of nutrients in pond water from previous production.

### Nutrient Management Practices

- Guidelines for fertilizing and feeding regimes to avoid wastes that in worst cases result in deteriorated water quality that threatens the health or condition of fish, humans and other biota.
- Avoiding feed and fertilizer wastes is cost-saving and translates directly to farm profitability.
- A recommendation to use floating feed rather than pelleted (sinking) feeds so that uneaten feed can be removed from ponds.
- A recommendation to pack fertilizer in slow-release sacs that can be removed when water attains the desired level of plankton bloom.

### Profitability Analysis

- Appropriate stocking and feeding regimes can reduce the cost of production through reduced aeration, better water quality, higher survival, reduced use of medication and chemicals, improved feed conversions, thereby increasing profitability by at least 20%.
- The use of new decision tools can enhance financial decision support systems designed to assist prospective, new, and existing fish farmers looking to adopt BMPs.

## OUTREACH ACTIVITIES

### Central Media

- A series of annual workshops to be held at the regional level targeting as many farmers as possible to expand first exposure to BMPs.

### Demonstrations

- On farm demonstrations have been identified as highly effective tools for the diffusion of innovations and a crucial ingredient for showing farmers the benefits of BMPs.
- Through the working relationships already established in Ghana, ponds have been selected as demonstration sites for the three target technologies.
- Ponds will be visited during the workshops to demonstrate the benefits of BMPs to participants and the data will be used for with-versus-without analyses.

### Lateral Diffusion

- Through regional workshops and demonstrations, a business enterprise network of farmers will be established. These farmers will become nodes for the propagation of information, laterally transmitting knowledge and expanding their network without the direct involvement of the central media.

### Gender Inclusivity

- Recognizing that the provision of equal opportunities for women's involvement is necessary for the advancement of the economic and social development of the aquaculture industry as well as the holistic household and family economy, deliberate efforts are being made to recruit women.

## FEED THE FUTURE, THE US GOVERNMENT'S GLOBAL HUNGER AND FOOD SECURITY INITIATIVE

Feed the Future (FtF) is part of a strategic and analytical approach to accelerate progress toward the Millennium Development Goal of halving the proportion of people living in extreme poverty by 2015. Reflecting a tradition of innovation, FtF aims to find new ways of leveraging science and technology, creating a focused vision, and encouraging new kinds of collaborations. Committed to working in partnerships toward the Millennium Development Goals, FtF is guided by the following principles:

- To invest in country-owned plans that support result-based programs and partnerships, tailoring assistance to the needs of individual countries.
- To foster strategic coordination, mobilizing and aligning the resources of diverse partners and stakeholders.
- To ensure a comprehensive approach that immediately tackles hunger for the most vulnerable and in the long-term maintains sustainable agriculture, food security, nutrition, and rural development programs that eliminate the root causes of poverty and hunger.
- To leverage the benefits of multilateral institutions for improvements in efficiency, responsiveness, coordination, and effectiveness of multilateral institutions.
- To effectively deliver on sustained and accountable commitments.

AquaFish CRSP is aligned with the FtF key objectives to accelerate inclusive agriculture sector growth and improve nutritional status. AquaFish CRSP's cross-cutting projects involve stakeholders at all levels and emphasize gender equity, environmentally sustainable development, and sound natural resources management. The FtF Associate Award directly involves three US universities collaborating with over ten Host Country organizations in three countries. Overall, AquaFish CRSP is currently engaged in ten of the 20 USAID FtF focus countries.

